

**Flood Control Project Maintenance
Levee Inspections**

Fall 2011 Levee Maintenance Deficiency Summary Report

Overall LMA & Unit Ratings, including USACE Erosion Survey

Sacramento River Basin

MA0005	Overall LMA Rating	Total LMA Miles				
Sutter Maintenance Yard Maintenance Area 0005	A	33.32				
Rated Item	M Miles	U Miles	M + 4U Miles	Threshold %	Encroachments	
					PO Miles	CO Miles
<i>Earthen Levee</i>						
Vegetation	0.02		0.02	0.06%		
Encroachments	0.10		0.10	0.30%	4.70	0.01
Animal Control	0.01		0.01	0.03%		
Slope Stability	0.01		0.01	0.03%		
Repair Gates	0.02		0.02	0.06%		
<i>Supplemental</i>						
USACE Erosion Survey	0.01		0.01	0.03%		
<i>LMA Totals:</i>	0.17	0.00	0.17	0.51%	4.70	0.01

Unit No. 01 Butte Creek 1 LB	Overall Unit Rating	Total Unit Miles				
MA0005	A	15.29				
Rated Item	M Miles	U Miles	M + 4U Miles	Threshold %	Encroachments	
					PO Miles	CO Miles
<i>Earthen Levee</i>						
Vegetation	0.01		0.01	0.07%		
Encroachments	0.04		0.04	0.26%	2.65	
Repair Gates	0.01		0.01	0.07%		
<i>Unit Totals:</i>	0.06	0.00	0.06	0.39%	2.65	0.00

Unit No. 02 Butte Creek 1 RB	Overall Unit Rating	Total Unit Miles				
MA0005	A	16.53				
Rated Item	M Miles	U Miles	M + 4U Miles	Threshold %	Encroachments	
					PO Miles	CO Miles
<i>Earthen Levee</i>						
Vegetation	0.01		0.01	0.06%		
Encroachments	0.06		0.06	0.36%	2.05	0.01
Animal Control	0.01		0.01	0.06%		
Slope Stability	0.01		0.01	0.06%		
<i>Supplemental</i>						
USACE Erosion Survey	0.01		0.01	0.06%		
<i>Unit Totals:</i>	0.10	0.00	0.10	0.61%	2.05	0.01

Unit No. 03 Little Chico Creek Diversion 1 LB	Overall Unit Rating	Total Unit Miles				
MA0005	A	1.50				
Rated Item	M Miles	U Miles	M + 4U Miles	Threshold %	Encroachments	
					PO Miles	CO Miles
<i>Earthen Levee</i>						
Repair Gates	0.01		0.01	0.67%		
<i>Unit Totals:</i>	0.01	0.00	0.01	0.67%	0.00	0.00

**Flood Control Project Maintenance
Levee Inspections**
LMA District Cover Sheet
Fall 2011 Levee Inspection Results

Sutter Maintenance Yard Maintenance Area 0005

	Spring (March - May)	Summer ** (June - August)	Fall (September - November)	Winter ** (December - February)
* Overall LMA Rating (Fall Only)			A	

** Non-receipt of Summer or Winter Inspection Reports may effect overall annual rating.

*
SPRING INSPECTIONS: Overall maintenance ratings are not determined for the spring inspection results. Individual maintenance deficiencies are rated using the same criteria in the spring and in the fall.

FALL INSPECTIONS: The overall maintenance rating shown above is based on operation and maintenance deficiencies identified within the attached unit inspection reports.

Comments

**Flood Control Project Maintenance
Levee Inspections**

Unit Cover Sheet

Fall 2011 Levee Inspection Results

Sutter Maintenance Yard Maintenance Area 0005

Waterway			Bank	Unit Miles
Unit No. 01 Butte Creek 1			Left	15.29
	Spring (March - May)	Summer (June - August)	(September - November) Fall	Winter (December - February)
Unit Maintenance Rating (Fall Only)			A	
Date of Inspection	4/21/2011 - 4/21/2011		10/26/2011 - 10/26/2011	
DWR Inspector	Bob Duffey		Bob Duffey	
Accompanied By	Jason Cooper Sutter Yard		Jason Cooper Sutter Yard	

Check one:

- ☐ During the current winter (or summer) inspection period, my staff or I have inspected the levee and associated flood project components identified in the attached Levee Inspection Report by Mile. We have found no changes in flood project conditions other than the results of our normal maintenance and the corrections we have made to maintenance deficiencies identified in the enclosed report.
- ☐ During the current winter (or summer) inspection period, my staff or I have inspected the levee and associated flood project components identified in the attached Levee Inspection Report by Mile. In addition to the results of our normal maintenance and the corrections we have made to maintenance deficiencies identified in the report, we have found the following changes in flood project conditions.

(In the comment section below or on additional sheet(s), identify change of condition by: Start to End Levee Mile or GPS coordinates, location (Land Side, Water Side, or Crown), Item identification, and description of the current condition).

Comments

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DWR Summer/Winter Inspection Reports
3310 El Camino Avenue, Suite 200
Sacramento, CA 95821-9000

X

Signature of LMA Representative

Date

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2011

Sutter Maintenance Yard Maintenance Area 0005

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Butte Creek 1	Left	15.29	10/26/2011 10/26/2011	Bob Duffey

LMR No.	Levee Mile		Category	Item	Location *	Rating **	Action/Comment	GPS Latitude/Longitude		Issue No.
	Start	End						Start	End	
1	0.58	0.58	Earthen Levee	Vegetation	LS	M	Elderberries are blocking visibility and flood fight capability.	39.690745 ° -121.777342 °	39.690745 ° -121.777342 °	903 Y
2	1.68	1.68	Earthen Levee	Encroachments	LS	M	Debris	39.675528 ° -121.778642 °	39.675528 ° -121.778642 °	1 Y
3	2.13	2.13	Earthen Levee	Repair Gates	CR	M		39.670112 ° -121.782012 °	39.670112 ° -121.782012 °	10
4	2.86	2.86	Earthen Levee	Encroachments	LS	M	Prunings	39.660124 ° -121.785136 °	39.660124 ° -121.785136 °	2 Y
5	3.12	3.12	Earthen Levee	Encroachments	LS	M	Prunings	39.656779 ° -121.787127 °	39.656779 ° -121.787127 °	3
6	3.27	3.27	Earthen Levee	Encroachments	LS	M	Prunings	39.654847 ° -121.787893 °	39.654847 ° -121.787893 °	4 Y
7	9.66	10.48	Earthen Levee	Encroachments	WS	PO	Agricultural Ditch	39.574837 ° -121.807913 °	39.567892 ° -121.819283 °	5 Y
8	12.00	13.83	Earthen Levee	Encroachments	LS	PO	Agricultural Ditch	39.551235 ° -121.837697 °	39.531462 ° -121.856165 °	6 Y

*** Location**

LS : Land Side
WS : Water Side
CR : Crown

**** Rating**

A : Acceptable PO : Partially Obstructing N : Not Inspected, see Inspector Comment C : Corrected
M : Minimally Acceptable CO : Completely Obstructing
U : Unacceptable W : Watch/Monitor

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2011

Sutter Maintenance Yard Maintenance Area 0005

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Butte Creek 1	Left	15.29	10/26/2011 10/26/2011	Bob Duffey

Levee Mile Report Line	1
Start Levee Mile	0.58
End Levee Mile	0.58
Location	Land Side
Category	Earthen Levee
Item	Vegetation

View of the large elderberries along the L/S toe.

rduffey_f_20110927_182.jpg



Levee Mile Report Line	2
Start Levee Mile	1.68
End Levee Mile	1.68
Location	Land Side
Category	Earthen Levee
Item	Encroachments

View of the removed garbage but construction supply on pallets.

rduffey_f_20110927_177.jpg



Levee Mile Report Line	4
Start Levee Mile	2.86
End Levee Mile	2.86
Location	Land Side
Category	Earthen Levee
Item	Encroachments

View of the large pruning along the L/S toe.

rduffey_f_20110927_178.jpg



* Location LS : Land Side WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	PO : Partially Obstructing CO : Completely Obstructing W : Watch/Monitor	N : Not Inspected, see Inspector Comment C : Corrected
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2011

Sutter Maintenance Yard Maintenance Area 0005

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Butte Creek 1	Left	15.29	10/26/2011 10/26/2011	Bob Duffey

Levee Mile Report Line	6
Start Levee Mile	3.27
End Levee Mile	3.27
Location	Land Side
Category	Earthen Levee
Item	Encroachments

View of pruning along the L/S toe.

rduffey_f_20111128_512.jpg



Levee Mile Report Line	7
Start Levee Mile	9.66
End Levee Mile	10.48
Location	Water Side
Category	Earthen Levee
Item	Encroachments

View of the AG ditch along the L/S toe.

rduffey_f_20110927_179.jpg



Levee Mile Report Line	8
Start Levee Mile	12.00
End Levee Mile	13.83
Location	Land Side
Category	Earthen Levee
Item	Encroachments

View of the AG ditch along the L/S toe.

rduffey_f_20110927_180.jpg



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**Flood Control Project Maintenance
Levee Inspections**

Unit Cover Sheet

Fall 2011 Levee Inspection Results

Sutter Maintenance Yard Maintenance Area 0005

Waterway			Bank	Unit Miles
Unit No. 02 Butte Creek 1			Right	16.53
	Spring (March - May)	Summer (June - August)	(September - November) Fall	Winter (December - February)
Unit Maintenance Rating (Fall Only)			A	
Date of Inspection	4/21/2011 - 4/21/2011		10/26/2011 - 10/26/2011	
DWR Inspector	Bob Duffey		Bob Duffey	
Accompanied By	Jason Cooper Sutter Yard		Jason Cooper Sutter Yard	

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(In the comment section below or on additional sheet(s), identify change of condition by: Start to End Levee Mile or GPS coordinates, location (Land Side, Water Side, or Crown), Item identification, and description of the current condition).

Comments

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Signature of LMA Representative

Date

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2011

Sutter Maintenance Yard Maintenance Area 0005

Waterway							Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Butte Creek 1							Right	16.53	10/26/2011 10/26/2011	Bob Duffey
LMR No.	Levee Mile		Category	Item	Location	Rating	Action/Comment	GPS Latitude/Longitude		Issue No.
	Start	End						Start	End	Photo
1	1.23	1.62	Earthen Levee	Encroachments	LS	PO	Agricultural Ditch	39.529933 ° -121.861563 °	39.534102 ° -121.856947 °	1 Y
2	1.89	1.89	Earthen Levee	Encroachments	LS	M	Garbage	39.536923 ° -121.853638 °	39.536923 ° -121.853638 °	4 Y
3	2.50	2.51	Supplemental	USACE Erosion Survey	WS	M	Inspector Comments: 2008 - Sandy non-cohesive bank with rotational/slab failure. 2011: No observed change. [2011 Site ID: BTC_2-5_R]	39.544374 ° -121.846366 °	39.544028 ° -121.846595 °	8 Y
4	3.15	4.60	Earthen Levee	Encroachments	LS	PO	Agricultural Ditch	39.551780 ° -121.840507 °	39.567430 ° -121.823065 °	7 Y
5	7.38	7.38	Earthen Levee	Encroachments	LS	M	Prunings	39.599607 ° -121.793848 °	39.599607 ° -121.793848 °	11 Y
6	7.86	7.86	Earthen Levee	Encroachments	LS	M	Prunings	39.605265 ° -121.788388 °	39.605265 ° -121.788388 °	2 Y
7	10.54	10.54	Earthen Levee	Encroachments	LS	M	Prunings	39.639018 ° -121.781458 °	39.639018 ° -121.781458 °	3
8	10.61	10.61	Earthen Levee	Encroachments	LS	M	Buildings	39.639967 ° -121.782152 °	39.639967 ° -121.782152 °	14 Y
9	10.81	10.81	Earthen Levee	Slope Stability	LS	M	Repair the levee slope damaged by foot traffic and prevent access where possible.	39.642447 ° -121.784105 °	39.642447 ° -121.784105 °	16 Y
10	11.22	11.22	Earthen Levee	Vegetation	LS	M	Elderberries are blocking visibility and flood fight capability.	39.647400 ° -121.787825 °	39.647400 ° -121.787825 °	26
11	11.74	11.95	Earthen Levee	Encroachments	LS	PO	Agricultural Ditch	39.654268 ° -121.789525 °	39.657142 ° -121.788690 °	6 Y
12	13.23	13.23	Earthen Levee	Encroachments	LS	M	Equipment	39.673956 ° -121.781278 °	39.673956 ° -121.781278 °	5
13	14.54	14.54	Earthen Levee	Encroachments	LS	CO	Buildings	39.691432 ° -121.778933 °	39.691432 ° -121.778933 °	25
14	15.96	15.96	Earthen Levee	Animal Control	LS	M	No rodents visible, but rodent burrows visible; need to backfill and compact or grout burrows.	39.711222 ° -121.778188 °	39.711222 ° -121.778188 °	12

*** Location**

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**** Rating**

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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2011

Sutter Maintenance Yard Maintenance Area 0005

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Butte Creek 1	Right	16.53	10/26/2011 10/26/2011	Bob Duffey

Levee Mile Report Line	1
Start Levee Mile	1.23
End Levee Mile	1.62
Location	Land Side
Category	Earthen Levee
Item	Encroachments

View of the AG ditch along the L/S toe.

rduffey_f_20110927_183.jpg



Levee Mile Report Line	2
Start Levee Mile	1.89
End Levee Mile	1.89
Location	Land Side
Category	Earthen Levee
Item	Encroachments

View of the garbage along the L/S toe.

rduffey_f_20110927_185.jpg



Levee Mile Report Line	3
Start Levee Mile	2.50
End Levee Mile	2.51
Location	Water Side
Category	Supplemental
Item	USACE Erosion Survey

USACE 2011 Photo #1

USACE2011_BTC_2-5_R_1.jpg



*** Location**

LS : Land Side
WS : Water Side
CR : Crown

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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2011

Sutter Maintenance Yard Maintenance Area 0005

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Butte Creek 1	Right	16.53	10/26/2011 10/26/2011	Bob Duffey

Levee Mile Report Line	3
Start Levee Mile	2.50
End Levee Mile	2.51
Location	Water Side
Category	Supplemental
Item	USACE Erosion Survey

USACE 2011 Photo #2

USACE2011_BTC_2-5_R_2.jpg



Levee Mile Report Line	4
Start Levee Mile	3.15
End Levee Mile	4.60
Location	Land Side
Category	Earthen Levee
Item	Encroachments

View of the AG ditch along the L/S toe.

rduffey_f_20110927_186.jpg



Levee Mile Report Line	5
Start Levee Mile	7.38
End Levee Mile	7.38
Location	Land Side
Category	Earthen Levee
Item	Encroachments

View of the pruning along the L/S toe.

rduffey_f_20111128_517.jpg

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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2011

Sutter Maintenance Yard Maintenance Area 0005

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Butte Creek 1	Right	16.53	10/26/2011 10/26/2011	Bob Duffey

Levee Mile Report Line	6
Start Levee Mile	7.86
End Levee Mile	7.86
Location	Land Side
Category	Earthen Levee
Item	Encroachments

View of the debris and garbage along the landside toe of the levee.

rduffey_f_20110927_184.jpg



Levee Mile Report Line	8
Start Levee Mile	10.61
End Levee Mile	10.61
Location	Land Side
Category	Earthen Levee
Item	Encroachments

View of the equipment along the L/S toe.

rduffey_f_20111128_516.jpg



Levee Mile Report Line	9
Start Levee Mile	10.81
End Levee Mile	10.81
Location	Land Side
Category	Earthen Levee
Item	Slope Stability

View of the vehicle erosion along the L/S slope.

rduffey_f_20111128_515.jpg



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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2011

Sutter Maintenance Yard Maintenance Area 0005

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Butte Creek 1	Right	16.53	10/26/2011 10/26/2011	Bob Duffey

Levee Mile Report Line	11
Start Levee Mile	11.74
End Levee Mile	11.95
Location	Land Side
Category	Earthen Levee
Item	Encroachments

View of the ditch along the L/S toe.

rduffey_f_20111128_514.jpg



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**Flood Control Project Maintenance
Levee Inspections**

Unit Cover Sheet

Fall 2011 Levee Inspection Results

Sutter Maintenance Yard Maintenance Area 0005

Waterway			Bank	Unit Miles
Unit No. 03 Little Chico Creek Diversion 1			Left	1.50
	Spring (March - May)	Summer (June - August)	(September - November) Fall	Winter (December - February)
Unit Maintenance Rating (Fall Only)			A	
Date of Inspection	4/21/2011 - 4/21/2011		10/26/2011 - 10/26/2011	
DWR Inspector	Bob Duffey		Bob Duffey	
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Levee Inspections**

Levee Inspection Report By Mile - Fall 2011

Sutter Maintenance Yard Maintenance Area 0005

Waterway					Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 03 Little Chico Creek Diversion 1					Left	1.50	10/26/2011 10/26/2011	Bob Duffey

LMR No.	Levee Mile		Category	Item	Location *	Rating **	Action/Comment	GPS Latitude/Longitude		Issue No.
	Start	End						Start	End	Photo
1	0.70	0.70	Earthen Levee	Repair Gates	CR	M		39.726622 ° -121.781545 °	39.726622 ° -121.781545 °	1 Y

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Levee Inspections**

Levee Inspection Report By Mile - Fall 2011

Sutter Maintenance Yard Maintenance Area 0005

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 03 Little Chico Creek Diversion 1	Left	1.50	10/26/2011 10/26/2011	Bob Duffey

Levee Mile Report Line	1
Start Levee Mile	0.70
End Levee Mile	0.70
Location	Crown
Category	Earthen Levee
Item	Repair Gates
View of the gate needing to be repaired. The hinge on this gate has broken.	
rduffey_f_20111128_513.jpg	

*** Location**

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